

Work Order ID 91456

October-10-12 1:03:04 PM

91456

Page 1

Item ID: D4542-3

Accept

N9000040100

Setup Start

NS1

Revision ID:

Item Name: Retainer, Inner

Stop

NS2

Start Date: 10/10/2012 Start Qty: 30.00

30

Cust Item ID:

Required Date: 11/03/2013 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals: Process Plan: MLS

Date: 12-10-10 Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4542

C pd1 13.03.05

0.00

100

100

Waterjet

FLOW CNC Waterjet

Memo

1- Cut as per dwg

Prog rev: PD1

Dwg rev: PD1

2- Deburr

SCRAP

0.00

30

DAS
05
2-89

13.03.05

110

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

0.00

Memo

30

DAS
05
2-89

13.03.05

P10 →

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input checked="" type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input checked="" type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input type="checkbox"/> Setup <input type="checkbox"/> Other <input checked="" type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>	13/4/23	# 100	x30	PARTS ARE SCRAP Due to Design Change. Per ECU 13-554	DAS 16 9-10 13/4/23	SCRAP + Destroy	Ae 13.04.23	S 13/4/24	DAS 16 9-10 13/04/23		
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input checked="" type="checkbox"/> Other		
Per ECU 13-554											

Work Order ID 91456

October-10-12 1:03:04 PM

91456

Page 2

Item ID: D4542-3

Accept

N9000040100

Setup Start ***NS1***

Revision ID:

Item Name: Retainer, Inner

Stop ***NS2***

Start Date: 10/10/2012 Start Qty: 30.00 ***30***

Cust Item ID:

Required Date: 11/03/2013 Req'd Qty: 30.00 ***30***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC8- Inspect parts - second check

0.00

120

QC Memo

0.00

Quality Control

Acid etch + Alodine

QC 7

130 Identify as per dwg & Stock Location: _____

0.00

130

Packaging Memo

0.00

Packaging

140 QC21- Final Inspection - Work Order Release

0.00

140

QC Memo

0.00

Quality Control

11/3-0424

POSITIVE RECALL
EFFECTIVE 130227 AUTH u
RELEASED _____ DATE _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
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Material <input type="checkbox"/>												
Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												
FAULT CATEGORY												
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge _____ _____ _____		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other _____ _____ _____	

Picklist Print

October-10-12 1:03:08 PM

Page 1

Work Order ID: 91456

91456

Parent Item: D4542-3

D4542-3

Parent Item Name: Retainer, Inner

Start Date: 10/10/2012

Required Date: 11/03/2013

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP revA 12.01.04 New Issue EC verified by:DD IPP REV:B
12.02.24 as per dwg revA DD verf:EC IPP REV:C 12.05.08 as
per dwg revB DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.032		Purchased	No			100	sf	700.0600	0.252	7.957895			
M6061T6S 032									**			<i>13.03.05</i>	

6061-T6 Sheet 0.032"

B# 124629

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT021	700.06	
121099	85.97	
122256	40.89	
122737	30.1	
123097	91.1	
123135	96	
123137	356	

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
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Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
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R0.06

36.9

15.3

Ø0.098
40 PLØ0.257
20 PL

0.344 TYP

0.688 TYP

GRAIN DIRECTION
20°0.51
REF1.275
TYP0.350
TYP

67°

D4542-1 RETAINER, LH INNER
(LOWER)RELEASED
2012-08-03**NOTES:**

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.17 lbs
- 8) PROFILE PER DRAWING FILE "D4542-1-REVC.DXF"



SHO...

RET...

ENGINE...

UNCONTROL...

SUBJECT TO...

WITH...

WORK...

NO. 91456 MLJ

12-10-10

C	CORRECT (MIRROR) HOLE LOC. ON -7 (ZN C3-5)	CP	12.07.12
B	RMV FINISH & ADD HOLES (-1/-2/-3/-5/-7)	CP	12.04.20
A	ADD/MODIFY ORIENTATION MARK (C2-4, C5-6)	CP	12.01.09
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED	ALS		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.07.12		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.

D4542

REV. C

SHEET 1 OF 5

TITLE

RETAINER, INNER

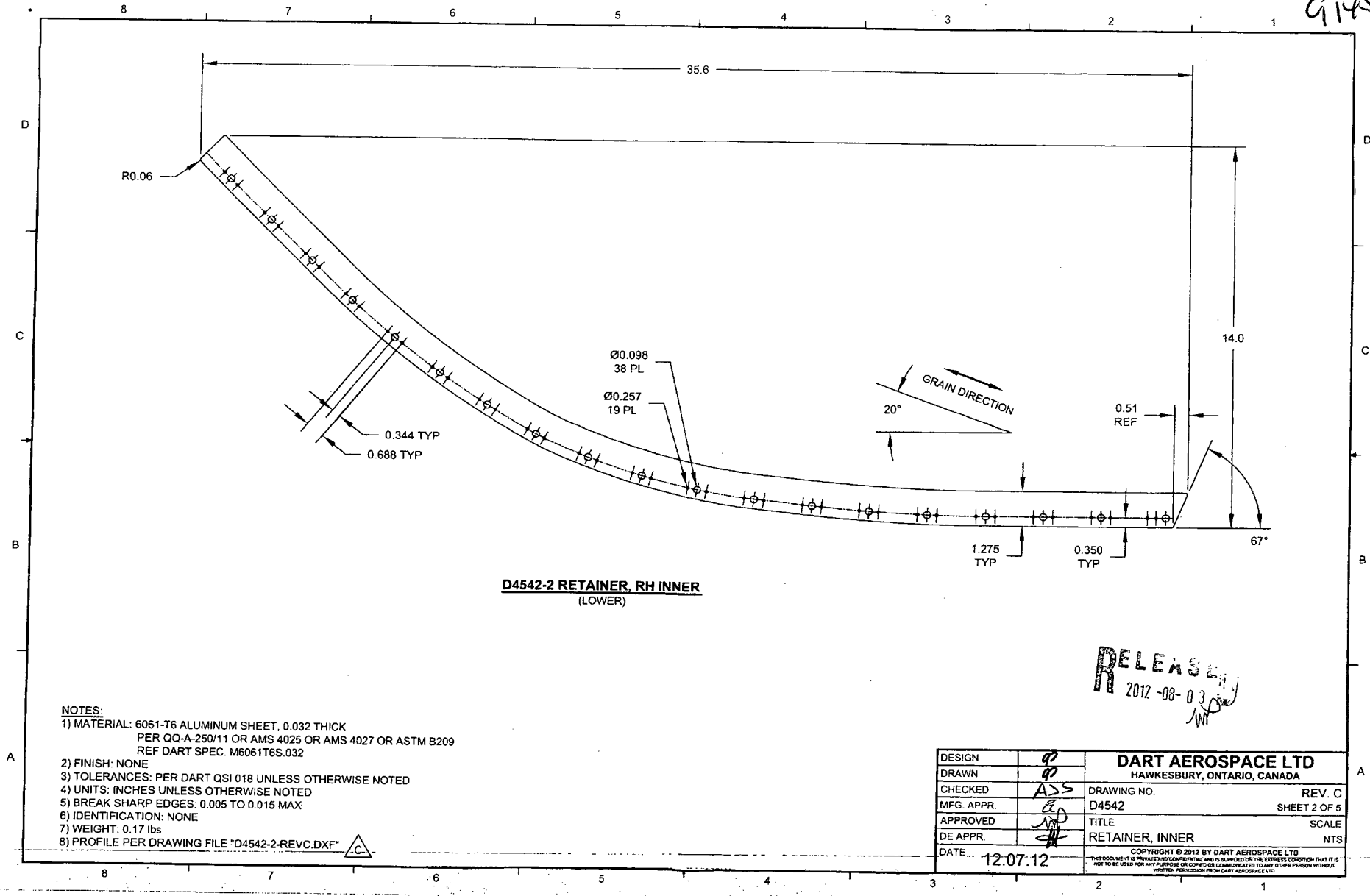
SCALE

NTS

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91456



- NOTES:**
- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.17 lbs
 - 8) PROFILE PER DRAWING FILE "D4542-2-REVC.DXF"

DESIGN	P	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	P		
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	ED	D4542	SHEET 2 OF 5
APPROVED	MD	TITLE	SCALE
DE APPR.	SH	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PROPRIETARY AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

R0.06
TYP

27.27

27.78

GRAIN DIRECTION

1.275

0.000

PRELIMINARY ISSUE

REV. PD1 CP 13.02.08

D4542-3 RETAINER, INNER
(SIDE)

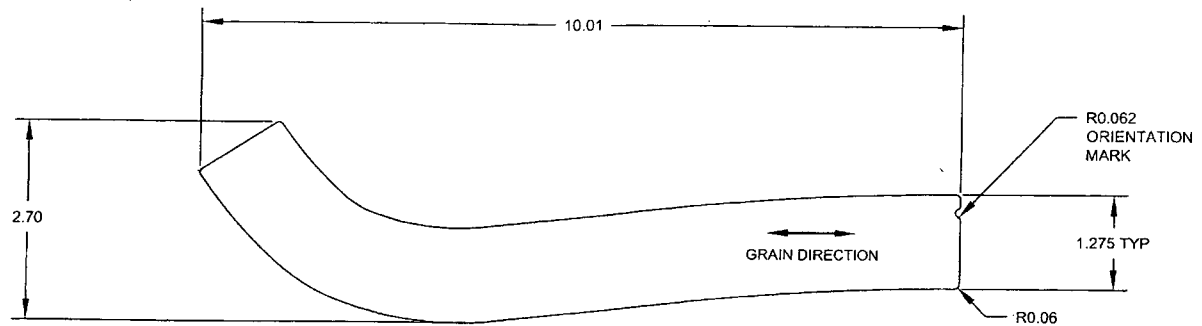


NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.11 lbs
- 8) PROFILE PER DRAWING FILE "D4542-3-REVD.DXF"

DESIGN	92	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	92		
CHECKED	ASS	DRAWING NO.	REV. PD1 REV-D
MFG. APPR.		D4542	SHEET 3 OF 5
APPROVED		TITLE	SCALE
DE APPR.		RETAINER, INNER	NTS
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91456



D4542-5 RETAINER, INNER
(TOP CORNER)

RELEASED
2012-08-03

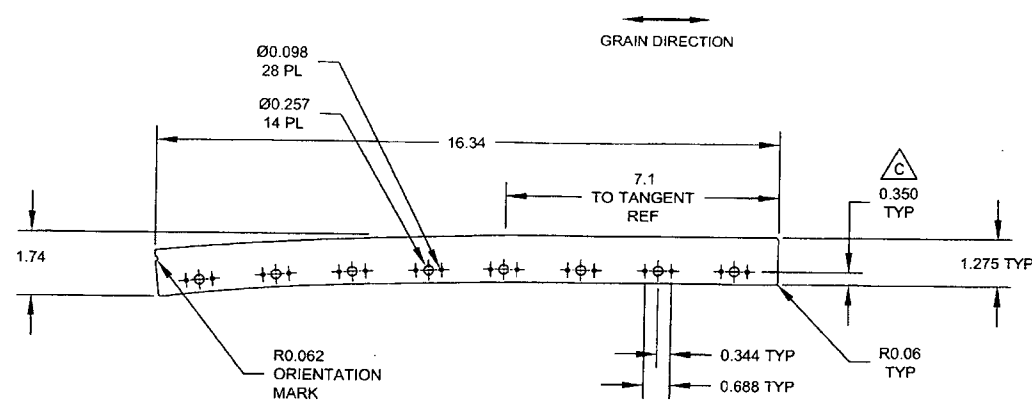
NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.04 lbs
- 8) PROFILE PER DRAWING FILE "D4542-5-REVC.DXF"



DESIGN	92	DART AEROSPACE LTD	
DRAWN	92	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	E	D4542	SHEET 4 OF 5
APPROVED	W	TITLE	SCALE
DE APPR.	W	RETAINER, INNER	NTS
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91456



D4542-7 RETAINER, INNER
(TOP)

RELEASED
2012-08-03

- NOTES:**
- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.07 lbs
 - 8) PROFILE PER DRAWING FILE "D4542-7-REVC.DXF"

DESIGN	92	DART AEROSPACE LTD	
DRAWN	92	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. C
MFG. APPR.	CE	D4542	SHEET 5 OF 5
APPROVED	CE	TITLE	SCALE
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DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD	
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